Reducing the impacts caused by U.S. Army Corps of Engineers activities in coastal national parks

by Julia Brunner and Rebecca Beavers

COPYRIGHT BOB BATTALIO

Altered by filling and building seaward of the natural beach, the shoreline of Ocean Beach in Golden Gate National Recreation Area is eroding. The Army Corps of Engineers, City of San Francisco, and National Park Service recognize the origin of the problem and are coordinating a solution to protect vulnerable infrastructure and preserve coastal processes and recreational park values such as surfing.

THE U.S. ARMY CORPS OF ENGINEERS (THE CORPS) builds and operates hundreds of flood control, environmental protection, and other civil works in and adjacent to units of the National Park System. Totaling millions of dollars, these projects include dredging of navigation channels, disposal of dredged sediments, replenishment of beach sand, construction of structures such as riprap and jetties, and, increasingly, "ecosystem restoration."

Some of these projects are completed upon a national park's request to benefit park resources. For example, the Corps is using a combined approach of riprap, sills, and constructed wetlands along selected segments of 17 miles of Jamestown Island's shoreline to stop riverbank erosion and protect archeological resources at Colonial National Historic Park, Virginia. Similarly, the Corps has replenished the beach within Gulf Islands National Seashore, Mississippi, to protect cultural resources at Fort Massachusetts. At Jean Lafitte National Historical Park and Preserve, Louisiana, the Corps is helping the park to protect thousands of acres of globally rare, floating estuarine marshes from erosion.

Formerly, some Corps projects have resulted in adverse effects on national parks. Previously at Cape Hatteras National Seashore (North Carolina), for example, the Corps deposited dredged material beyond the littoral (sediment) system, which hastened beach erosion and affected visitor enjoyment, infrastructure, and cultural resources. Additional erosion problems attributed to Corps-constructed jetties have occurred at Padre Island (Texas) and Assateague Island (Maryland) National Seashores.

Concerned about these impacts, several national parks are taking a proactive, two-pronged approach with the Corps. First, instead of simply reviewing documents detailing Corps project proposals in parks, five parks in 2002 sought (and three obtained) "cooperating agency" participation in the planning process in order to elevate concerns about preserving park resources. Second, these parks also require that Corps activities within park boundaries be conducted with NPS permission, typically a special use permit. These national parks are not attempting to hinder the Corps's mission; instead they are allowing Corps activities in parks to proceed subject to the terms and conditions necessary for protecting park resources, values, and visitor safety.

The results of this new relationship are positive. Fire Island National Seashore (New York), for example, as a cooperating agency helped the Corps recognize the value of using natural dune restoration in its Storm Damage Reduction Environmental Impact Statement. At Jean Lafitte's Barataria Preserve unit, Louisiana, the Corps agreed to abandon plans for bankside disposal of dredge spoil from a channel maintenance project, and will instead pump the material into a park-designated area, restoring 50 acres of marsh lost to erosion. On the other flank of the Barataria Preserve, where the Corps is constructing a hurricane protection levee for the suburbs of New Orleans, it redesigned borrow pits to enhance wildlife habitat and minimize impacts to hydrological function and the cultural landscape. Likewise, the input of Cape Hatteras National Seashore, North Carolina, in a Corps dredging project mitigated impacts to a wetland. Gulf Islands National Seashore's input on two dredging and restoration projects may increase the scope of alternatives. Assateague Island National Seashore is collaborating with the Corps to mitigate the impacts of the Ocean City inlet by restoring the natural sediment budget. Based on the response of the first phase of the project to several mild storms, the restoration appears to be performing exactly as planned. Finally, Golden Gate National Recreation Area is working closely with the Corps, the City of San Francisco, and other entities to ensure consideration of park resources and values in plans for protecting vulnerable municipal infrastructure along the eroding shoreline of Ocean Beach.

Like any new strategy, this one will take time to implement effectively throughout the National Park System. Clearly, the new NPS approach is stimulating better Corps project design and implementation and enhancing protection of NPS coastal resources. The Geologic Resources Division can help national parks lacking staff or expertise to adopt this approach elsewhere. ■

julia_f_brunner@nps.gov
Regulatory/Policy Specialist, Geologic Resources Division, Lakewood, Colorado

rebecca_beavers@nps.gov
Coastal Geologist, Geologic Resources Division, Lakewood, Colorado